AMENDMENTS TO THE CLAIMS

Claim 1 (Currently amended): A method for production of three-dimensional bodies by successive fusing together of selected areas of a powder bed, which parts correspond to successive cross sections of the three-dimensional body, ~~which method comprises the following method steps~~the method comprising:

~~application of~~applying powder layers to a work table,

supplying energy ~~from a~~from one radiation gun, according to an operating scheme determined for the powder layer, to said selected area ~~within the powder layer~~, where said supplying includes

~~fusing together that area of the powder layer selected according to said operating scheme for~~ forming a cross section of said three-dimensional body by fusing together the powder in said area, ~~a three-dimensional body being formed by successive fusing together of successively formed cross sections from successively applied powder layers, characterized in that~~such that ~~said selected area has~~ two or more fusion zones ~~which~~ propagate simultaneously through the selected area ~~when formation of a cross section of the three-dimensional body takes place~~during said forming.

Claim 2 (Currently amended): The method as claimed in claim 1, ~~characterized in that said two or more fusion zones are brought about by a radiation gun~~said supplying including supplying energy to two or more geometrically separate focal points while time sampling takes place, thereby creating said fusion zones.

Claim 3 (Currently amended): The method as claimed in claim ~~1 or~~ 2, ~~characterized in that~~the method further including propagating the focal points ~~of said radiation gun~~ at said ~~two~~ fusion ~~points propagate~~zones at a speed which corresponds to ~~the~~ a wave propagation speed of the fusion zone.

Claim 4 (Currently amended): The method as claimed in claim 3, ~~characterized in that~~the

method further including estimating said wave propagation speed ~~is estimated by measuring the wave propagation speed of the fusion zone~~ from information provided by ~~means for sensing~~measuring the temperature distribution of a surface layer ~~located in the powder bed~~of said selected area.

Claim 5 (Currently amended): The method as claimed in claim 3, ~~characterized in that~~the method further including estimating said wave propagation speed ~~is estimated~~ by calculating an energy balance for an area comprising said focal points, said wave propagation speed being obtained from a model of a thermal conductivity equation set up for said area.

Claim 6 (Currently amended): The method as claimed in claim 1, ~~characterized in that~~the method further including calculating an energy balance ~~is calculated~~ for at least one part area within each powder layer, ~~it being determined in the calculation~~said calculating including determining whether energy radiated into the part area ~~from the surroundings of the part area~~ is sufficient to maintain a defined working temperature of the part area.

Claim 7 (Currently amended): The method as claimed in claim 6, ~~characterized in that~~said supplying energy including supplying, in addition to ~~said~~ energy for fusing together the part area, energy for heating the part area ~~is supplied~~to a defined working temperature if the result of the energy balance calculation is that there is not sufficient energy for maintaining ~~an intended working temperature of the part area is not present, a~~the part area at the defined working temperature ~~of the part area then being achieved~~.

Claim 8 (Cancelled)

Claim 9 (Currently amended): An arrangement for producing a three-dimensional product, ~~which arrangement comprises~~the arrangement comprising:

a work table ~~on which~~where said three-dimensional product is ~~to be~~ built up,

a powder dispenser which ~~is arranged so as to distribute~~forms a powder bed by distributing a thin layer of powder on the work table ~~for forming a powder bed~~,

a radiation gun ~~for delivering~~that supplies energy to the powder~~, fusing together of the powder then taking place, means for guiding~~

a beam guide that guides ~~the~~ a beam emitted by the radiation gun ~~over said powder bed for forming~~such that said beam forms a cross section of said three-dimensional product by successively fusing together ~~parts~~ selected areas of said powder bed, and

a control computer ~~in~~ which

stores information about successive cross sections of the three-dimensional product ~~is stored~~, ~~which cross sections build up the three-dimensional product, where the control computer is intended to control~~, and

controls said ~~means for guiding the radiation gun over the powder bed~~beam guide according to an operating scheme forming a cross section of said three-dimensional body, ~~said three-dimensional product being formed by successive fusing together of successively formed cross sections from by the powder dispenser, characterized in that~~

where said operating scheme ~~is arranged so as to guide~~guides the ~~radiation gun~~beam to two or more fusion zones of said selected area, ~~which~~ the fusion zones ~~propagate~~ propagating simultaneously through the selected area ~~when~~ during formation of ~~a~~ said cross section ~~of the three-dimensional body takes place~~.

Claim 10 (Currently amended): The arrangement as claimed in claim 9, ~~characterized in that said~~where the operating scheme ~~is arranged so as, while time sampling takes place, to~~guides ~~guide said radiation gun~~the beam to two or more fusion zones while time sampling takes place, ~~for~~ thereby supplying energy to two geometrically separate focal points.

Claim 11 (Currently amended): The arrangement as claimed in claim ~~9 or~~ 10, ~~characterized in that said~~where the operating scheme ~~is arranged so as to guide~~guides the focal points of the ~~radiation gun~~beam at said ~~two~~ fusion ~~points~~ zones at a propagation speed which corresponds to ~~the~~ a wave propagation speed of the fusion zone.

Claim 12 (Currently amended): The arrangement as claimed in claim 11, ~~characterized in that~~where the control computer ~~is arranged so as to estimate~~estimates said wave propagation speed ~~by measuring the wave propagation speed of the fusion zone~~ from information provided by ~~means for sensing~~ measuring the temperature distribution of a surface layer of said selected area ~~located in the powder bed~~.

Claim 13 (Currently amended): The arrangement as claimed in claim 11, ~~characterized in that~~where the control computer ~~is arranged so as to estimate~~estimates said wave propagation speed by calculating an energy balance for an area comprising said focal points, said wave propagation speed being obtained from a model of a thermal conductivity equation set up for said area.

Claim 14 (Currently amended): The arrangement as claimed in claim 10, ~~characterized in that~~where the control computer ~~is also arranged so as to calculate~~calculates an energy balance for at least one part area within each powder layer, ~~it being determined~~and determines, in the calculation, whether energy radiated into the part area ~~from the surroundings of the part area~~ is sufficient to maintain a defined working temperature of the part area.

Claim 15 (Currently amended): The arrangement as claimed in claim 14, ~~characterized in that~~ the control computer ~~is arranged so as to control~~controls said ~~operating scheme~~beam guide ~~for supply of~~such that, in addition to ~~said~~ supplying energy for fusing together powder layers, said radiation gun supplies energy for heating the ~~powder layer~~part area to a defined working temperature if the result of the energy balance calculation is that the operating scheme ~~is not providing sufficient~~provides insufficient energy for maintaining ~~an intended working temperature of~~ the part area~~, a~~ at the defined working temperature ~~of the part area then being maintained~~.

Claim 16 (Cancelled)

Claim 17 (Currently amended): The arrangement as claimed in ~~claim 10~~claim 9, ~~characterized in that~~ the arrangement ~~also comprises~~further comprising ~~means for sensing the temperature distribution of~~ a surface layer temperature distribution sensor ~~located in the powder bed~~that senses the temperature distribution of a surface layer of said selected area.